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HEATED CHROMATOGRAPHIC SEPARATION PROCESS

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Abstract (en)

The present invention provides a chromatographic separation process for recovering a polyunsaturated fatty acid (PUFA) product from a feed mixture, which process comprises passing the feed mixture through one or more chromatographic columns containing, as eluent, an aqueous organic solvent, wherein the temperature of at least one of the chromatographic columns through which the feed mixture is passed is greater than room temperature, wherein the diameter of each column is between 10 and 1000 mm, and the length of each column is between 10 and 300 cm, wherein the PUFA product comprises a PUFA or a PUFA derivative, wherein the derivative is a mono- or di-glyceride, ester, phospholipid, amide, lactone, or salt of the PUFA, and wherein the process is other than a chromatographic separation process for recovering a polyunsaturated fatty acid (PUFA) product, from a feed mixture, which process comprises introducing the feed mixture to a simulated or actual moving bed chromatography apparatus having a plurality of linked chromatography columns containing, as eluent, an aqueous alcohol, wherein the apparatus has a plurality of zones comprising at least a first zone and second zone, each zone having an extract stream and a raffinate stream from which liquid can be collected from said plurality of linked chromatography columns, and wherein (a) a raffinate stream containing the PUFA product together with more polar components is collected from a column in the first zone and introduced to a nonadjacent column in the second zone, and/or (b) an extract stream containing the PUFA product together with less polar components is collected from a column in the second zone and introduced to a nonadjacent column in the first zone, said PUFA product being separated from different components of the feed mixture in each zone, which chromatographic separation process is conducted at from 15 to 55°C.

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